

**ONE NEW GENUS AND THREE NEW SPECIES OF  
ACANTHOCEPHALINI (HEMIPTERA: HETEROPTERA:  
COREIDAE: COREINAE)**

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*Abstract.*—*Cleotopetalops* new genus, and three new species, *C. bicolor*, *C. cyanocephalus*, and *C. polhemi*, collected in Ecuador and Peru, are described, illustrated, and included in the tribe Acanthocephalini (Coreidae). Each species is compared with the closest one.

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The Acanthocephalini is a New World tribe with its greatest diversity in the tropics. Some species exhibit an attractive green or blue iridescence, although coloration throughout the tribe varies widely. It is abundant and diverse not only in the number and variety of taxa present, but in the abundance of many individuals of some species.

The tribe can be recognized by the tylus projecting conspicuously beyond the juga as a distinct acute plate, the juga deflexed, the abdominal spiracles close to the anterior edge of the sternum, hind femora of males usually greatly incrassate, and all femora of both sexes ventrally armed (Packauskas, 1994).

Brailovsky (1997) listed the known genera of Acanthocephalini, described one new genus and two new species from Peru, and discussed the differences between this tribe and Anisoscelini.

This article adds one new genus and three new species, collected in Ecuador and Peru. This new genus is apparently unique among members of Acanthocephalini in having the humeral angles remarkably produced into sharp spines turning upward and slightly backwards, the metapleural supracoxal spine lacking in both sexes, the male hind femora not greatly incrassate, the hind tibiae cylindrical and not expanded, antennal segment III cylindrical, and the pronotum with distinct collar.

The following abbreviations are used in the text: California Academy of Sciences, San Francisco (CAS); Joe E. Eger collection (EGER); Pontificia Universidad Católica del Ecuador (PUCE); Instituto de Biología, Universidad Nacional Autónoma de México (UNAM); United States National Museum, Smithsonian Institution, Washington D.C. (USNM).

All measurements are in millimeters.

***Cleotopetalops*, new genus**

**Description.** *Head.* Wider than long, quadrate, non declivent, flat dorsally; tylus acute, incrassate medially, projecting beyond antenniferous tubercles by less than half length, and scarcely raised above dorsal level of antenniferous tubercles; juga not visible from above, not extending past antenniferous tubercles; antenniferous tubercles parallel, unarmed, closely appressed to tylus; posttylar depression with single sulcus; antennal segment I stouter than segments II to IV, longer than maximal

length of head, and scarcely curved outwards; segments II and III cylindrical, slender, and segment IV fusiform; antennal segment IV the longest, segment III the shortest, and I longer than II; antennal segment IV longer than II and III combined; ocelli conspicuously tuberculate; preocellar pit subcircular, and deep; eyes hemispherical, protuberant; postocular tubercle nearly smooth with eye, indistinct; buccula semicircular, short, elevated, not projecting beyond anterior margin of eye; rostrum reaching posterior border of mesosternum, or anterior margin of metasternum; proportion between the length of each rostral segment variable through the species. *Pronotum*. Wider than long, trapeziform, declivous, with distinct collar; frontal angles blunt; anterolateral margins obliquely straight, nodulose; humeral angles remarkably produced into sharp spines, turning upward, and slightly backwards; posterolateral margins sinuate with external third nodulose and with four long and broad spines, and internal third smooth; posterior margin straight, smooth; calli flat; triangular process present (Fig. 3). Prosternum with deep concavity; mesosternum, and metasternum non sulcate; mesosternum anteriorly tuberculate between procoxae; metapleural supracoxal spine lacking in both sexes; anterior lobe of metathoracic peritreme auriculiform, and fused with posterior lobe almost truncated. *Legs*. Fore femur slender, armed ventrally with one row of spines, and dorsal surface with small tubercles; middle femur slender, armed ventrally with one row of internal spines, and one row of external tubercles, and dorsal surface minutely tuberculate; hind femur in both sexes extending far from the apex of the last abdominal segment, moderately robust, without basal dorsal spine, armed ventrally with two rows of broad spines, and dorsal surface densely tuberculate, intermixed with few broad spines; hind tibiae cylindrical, not expanded, sulcate, in males armed internally with one row of small spines, in females unarmed. *Scutellum*. Triangular, flat, longer than wide, with apex subacute. *Hemelytra*. Macropterous, extending beyond apex of abdomen; apical margin narrowed, long, extending beyond middle third of hemelytral membrane. *Abdomen*. Posterior angles of connexival segments II to VI entire, not spined; upper margin of male connexival segments III to VII spined and tuberculate along entire edge, in females scattered with few tubercles; abdominal sterna without medial furrow; abdominal spiracles closer to upper edge, than to anterior or posterior border of each sternite. *Male genitalia*. Genital capsule with posteroventral edge laterally produced into short blunt lobes, and between them with small sized concavity (Fig. 4), or lateral angles straight, with deep "V" concavity (Fig. 5), or with broad medial plate, scarcely exposed and slightly sinuate, and with lateral angles depressed (Fig. 6). *Female genitalia*. Abdominal sternite VII with plica and fissura; plica transversely straight; gonocoxae I triangular, in caudal view close; paratergite VIII subtriangular, with visible spiracle; paratergite IX squarish, longer than paratergite VIII. *Integument*. Body surface dull, without metallic reflections; collar, posterior lobe of pronotal disc, scutellum, clavus, corium, acetabulae, posterior half of thoracic propleura, and posterior margin of mesopleura and metapleura densely punctate; head, callar region, anterior half of propleura, great portion of mesopleura and metapleura, sternal region of thorax, abdomen, male genital capsule, and female genital plates impunctate; pronotal disc not nodulose; head, pronotum, legs, mesosternum, metasternum, and abdominal sternite clothed with long erect bristle like-setae; clavus, corium, propleura, mesopleura, and metapleura, and antennal segments I to IV clothed with short decumbent to suberect bristle like-setae.

**Discussion.** This genus is closely related to *Petalops* Amyot & Serville, sharing with it the following characters: hind tibia simple, not expanded; rostrum never reaching the abdomen, rostral segment III never the shortest; scutellum clearly longer than wide; metathoracic peritreme with two lobes; and humeral angles of pronotum acute. *Cleotopetalops* new genus, differs primarily by the following combination of characters: humeral angles conspicuously produced into sharp spines turned upward and slightly backwards (Fig. 3); metapleural supracoxal spine lacking in both sexes; hind femur of males moderately slender, and basally without a dorsal spine; hind tibiae of males internally with one row of small spines; and general color of the body without metallic reflection. Additional characters are the tylus in lateral view scarcely raised above dorsal level of antenniferous tubercles, and antennal segment I longer than II. In *Petalops* the humeral angles are slightly spined (Fig. 2), the metapleural supracoxal spine is present in males, and lacking in females, the hind femora of males are strongly incrassate with a clear dorsal spine basally, the hind tibiae of males have one row of strong and broad spines internally, and the general color of the body has metallic reflections. The tylus in lateral view is conspicuously raised above the dorsal level of the antenniferous tubercles, and antennal segment II is longer than I. *Cleotopetalops* also resembles *Stenometapodus* Breddin in the condition of the pronotal disc without tubercles, the humeral angles acute, the upper margins of male connexival segments III to VII spined and tuberculate along their entire edges, and the scutellum with erect bristle like-setae. *Stenometapodus* is distinguished easily by having the hind tibia expanded, widely in females, more narrowly in males, the inner face of female hind tibiae strongly spined, the hind femur strongly incrassate, the posterior angles of connexival segments V–VI spined, and the humeral angles exposed, with medium sized spines (Fig. 1). In *Cleotopetalops* the hind tibia in both sexes are simple, slender and not expanded, the inner face of female hind tibia is unarmed, the hind femur moderately slender, the posterior angles of connexival segments V–VI are smooth and not spined, and the humeral angles remarkably produced into sharply spines (Fig. 3).

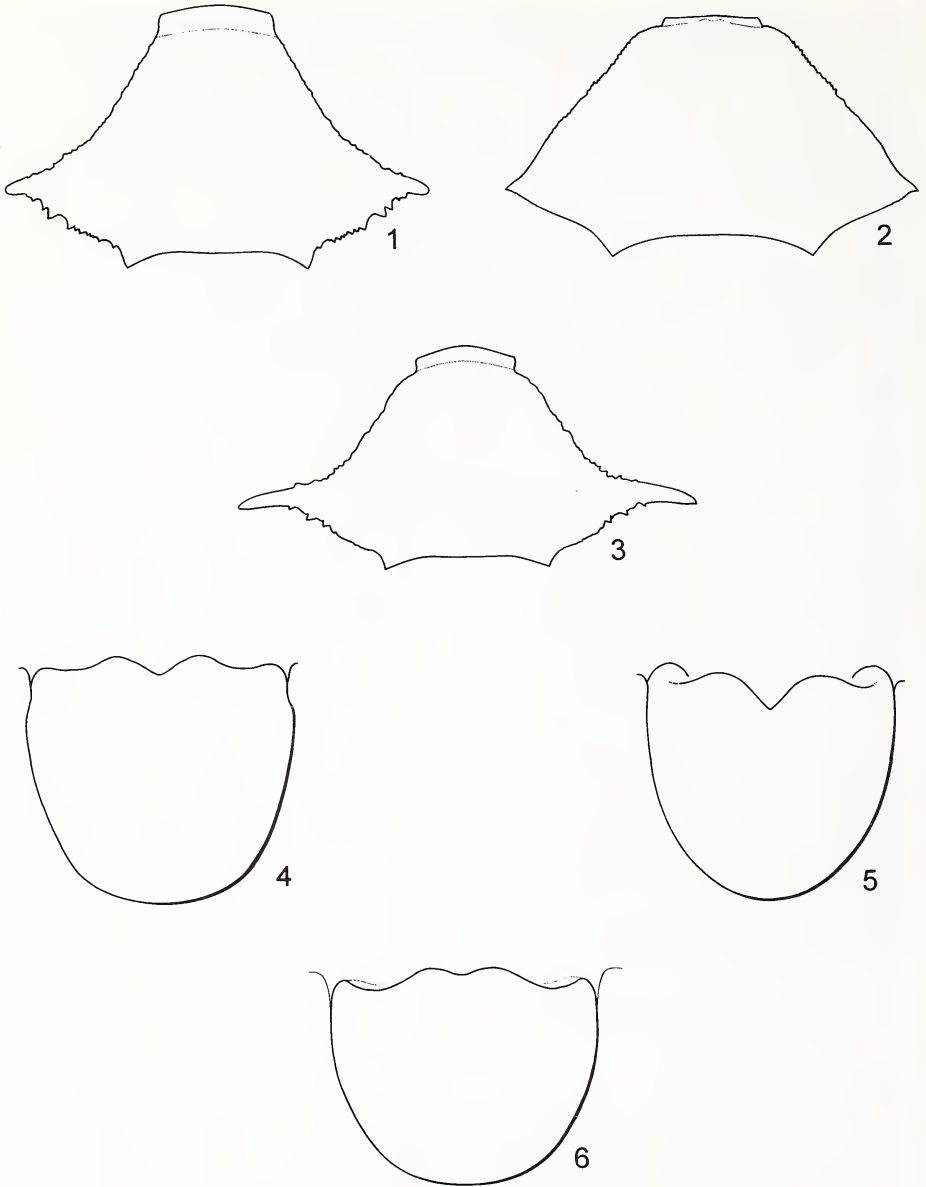
**Etymology.** From the Greek, *cleotos*, meaning collar, referring to the distinctive pronotal collar, and *Petalops*, for the close genus.

**Type species.** *Cleotopetalops bicolor*, new species.

### ***Cleotopetalops bicolor*, new species**

Figs. 3–4

**Description.** *Male. Dorsal coloration.* Head black with inner face of antenniferous tubercles and narrowed longitudinal stripe running between ocelli until base of tylus yellow; antennal segments I to III bright chestnut orange, and IV reddish brown; pronotum black; scutellum black with apex dirty yellow; clavus black with claval suture pale yellow; corium black with apical angle and broad and curved longitudinal stripe running through endocorium pale yellow; hemelytral membrane black with veins pale grey; connexival segments II to VI dirty yellow with inner margin black, and upper border reddish brown; connexival segment VII black with anterior angle dirty yellow, and upper border reddish brown; dorsal abdominal segments black with broad dirty yellow stripe running through middle third of II to anterior margin of segment VII. *Ventral coloration.* Head black; rostral segments I and II chestnut



Figs. 1-6. Structural details of Coreinae. Figs 1-3. Shape of pronotum. Fig. 1. *Stenometaopodus v-luteum* Breddin. Fig. 2. *Petalops distinctus* Montandon. Fig. 3. *Cleotopetalops bicolor* new species. Figs. 4-6. Male genital capsule in caudal view of *Cleotopetalops* spp. Fig. 4. *C. bicolor* new species. Fig. 5. *C. polhemi* new species. Fig. 6. *C. cyanocephalus* new species.



brown with orange reflections, and segments III and IV bright orange (apex of IV brown); thorax black with acetabulae, anterior and posterior lobe of metathoracic peritreme, evaporative area, coxae and trochanters bright orange; fore and middle leg, with femora, tibiae and tarsi bright chestnut red; hind femur black to dark reddish brown with basal joint bright chestnut red; hind tibia bright chestnut red, with apical joint yellow; hind tarsi with basal segment bright orange, and middle and apical segments bright chestnut red; abdominal sterna black with pleural margin II to VI and anterior half of VII yellow; genital capsule black. *Structure*. Triangular process of posterior margin of pronotum scarcely developed. *Genital capsule*. Posteroventral edge laterally produced into short blunt lobes, and between them a small sized concavity (Fig. 4).

*Measurements*. Length head: 1.77; width across eyes: 2.20; interocular space: 0.90; interocellar space: 0.50; length of antennal segments: I, 4.75; II, 4.10; III, 3.35; IV, 8.40; length of rostral segments: I, 1.30; II, 1.19; III, 1.30; IV, 1.25. Pronotum length: 3.60; width across frontal angles: 1.90; width across humeral angles: 6.80. Scutellar length: 2.17; width: 1.85. Total body length: 16.05.

*Female*. Similar to male. Apex of scutellum reddish brown to black; connexival segments VIII and IX black; dorsal abdominal segments VIII and IX black with middle third of anterior margin dirty yellow; rostral segment I bright chestnut red, segment II with external face bright chestnut red, and internal face bright orange, and segments III and IV bright orange (apex of IV brown); abdominal sterna black with pleural margins II to anterior third of VII, and two broad longitudinal stripes running lateral to middle line through II to VI abdominal sterna dirty yellow; genital plates black.

*Measurements*. Length head: 1.85; width across eyes: 2.30; interocular space: 0.90; interocellar space: 0.50; length of antennal segments: I, 4.67; II, 3.77; III, 3.18; IV, 8.95; length of rostral segments: I, 1.45; II, 1.25; III, 1.35; IV, 1.30. Pronotum length: 3.75; width across frontal angles: 2.00; width across humeral angles: 6.75. Scutellar length: 2.50; width: 2.15. Total body length: 18.15.

**Types**. Holotype, ♂, ECUADOR, **Napo**, 20 km E of Puerto Napo, Aliñahui, 1°03'S, 77°40'W, 450 m, ii.1991, E. S. Ross (CAS). Paratypes: 1 ♂, 1 ♀, ECUADOR, **Napo**, vic. Puerto Misahuali, 1°2'4.2"S, 77°39'49.2"W, 1650–1900', 6–19.ix.1998, J. E. Eger (EGER, UNAM).

**Etymology**. Named for the two colored appearance of the corium.

**Distribution**. Known only from Ecuador.

### **Cleotopetalops cyanocephalus**, new species

Fig. 6

**Description**. *Male*. *Dorsal coloration*. Head black with inner face of antenniferous tubercles, and narrowed longitudinal stripe running between ocelli until base of tylus yellow; antennal segments I to IV black to reddish brown; pronotum dirty chestnut orange with collar, calli, posterior margin and humeral angles black; scutellum black with apex dark chestnut orange; clavus and corium black with costal border and apical angle dark chestnut orange; connexival segments III and IV black with upper margin dirty yellow, segments V and VI yellow, and VII black with anterior third yellow; dorsal abdominal segments II to VI black, and VII black with yellowish

quadrate spot located at middle third of anterior margin. *Ventral coloration.* Head black with buccula and rostral segments I to IV (apex of IV black) bright chestnut orange; collar, prosternum, mesosternum and thoracic metasternum, anterior margin of propleura and mesopleura, the totality of metapleura, anterior and posterior lobe of metathoracic peritreme, and evaporative area bright chestnut orange; coxae, trochanters, and anterior third of femora bright chestnut orange; femora and tibiae black to reddish brown; outer face of each segment of fore and middle tarsi reddish brown and inner face dirty yellow; hind tarsus with basal and middle segments entirely pale yellow, and distal segment with outer face reddish brown, and inner face dirty orange; abdominal sternite III black with two broad dirty yellow longitudinal stripes lateral to midline, sternite IV to VI black with pleural margin yellow green, and segment VII black with anterior third yellow green; genital capsule black. *Structure.* Triangular process of pronotum well developed. *Genital capsule.* Posteroventral edge with broad, median plate, scarcely exposed and sinuate, and with lateral angles depressed (Fig. 6).

*Measurements.* Length head: 1.93; width across eyes: 2.30; interocular space: 1.00; interocellar space: 0.47; length of antennal segments: I, 4.95; II, 4.25; III, 3.65; IV, 8.20; length of rostral segments: I, 1.29; II, 1.14; III, 1.19; IV, 1.25. Pronotum length: 3.55; width across frontal angles: 2.00; width across humeral angles: 7.05. Scutellar length: 2.20; width: 1.90. Total body length: 17.55.

*Female.* Unknown.

**Types.** Holotype, ♂, ECUADOR, **Sucumbios**, Cuyaesno, 230 m, 13–25.vii.1992, Thantanoar (PUCE).

**Discussion.** *Cleotopetalops cyanocephalus*, new species, is easily recognizable by the broad medial plate of the posteroventral edge of the male genital capsule (Fig. 6) and by having the pronotal disc dirty chestnut orange with only the collar, calli, posterior margin and humeral angles black. In *C. bicolor* the pronotum is entirely black, and the posteroventral edge of male genital capsule has a small sized concavity (Fig. 4).

**Etymology.** Named for the dark coloration of the head; from the Greek, *Cyaneos*, dark, and *cephale*, head.

**Distribution.** Known only from Ecuador.

### ***Cleotopetalops polhemi*, new species**

Figs. 5, 7

**Description.** *Male. Dorsal coloration.* Head black with inner face of antenniferous tubercles, and narrowed longitudinal stripe running between ocelli until base of tylus yellow; antennal segment I to IV black; pronotum, scutellum (apex dirty yellow), and clavus reddish black; corium reddish black with costal border dirty yellow and veins chestnut orange; connexival segments with upper margin dirty yellow and inner margin black; dorsal abdominal segments black with dirty yellow spots on posterior margin of segments V and VI, anterior margin of VI and middle third of VII. *Ventral coloration.* Head reddish brown with buccula, longitudinal stripe running lateral to middle line behind eyes, and rostral segments I to IV (apex of IV black) chestnut orange; acetabulae, anterior and posterior lobe of metathoracic peritreme, evaporative area, prosternum, mesosternum, coxae and trochanter bright orange; propleura, me-

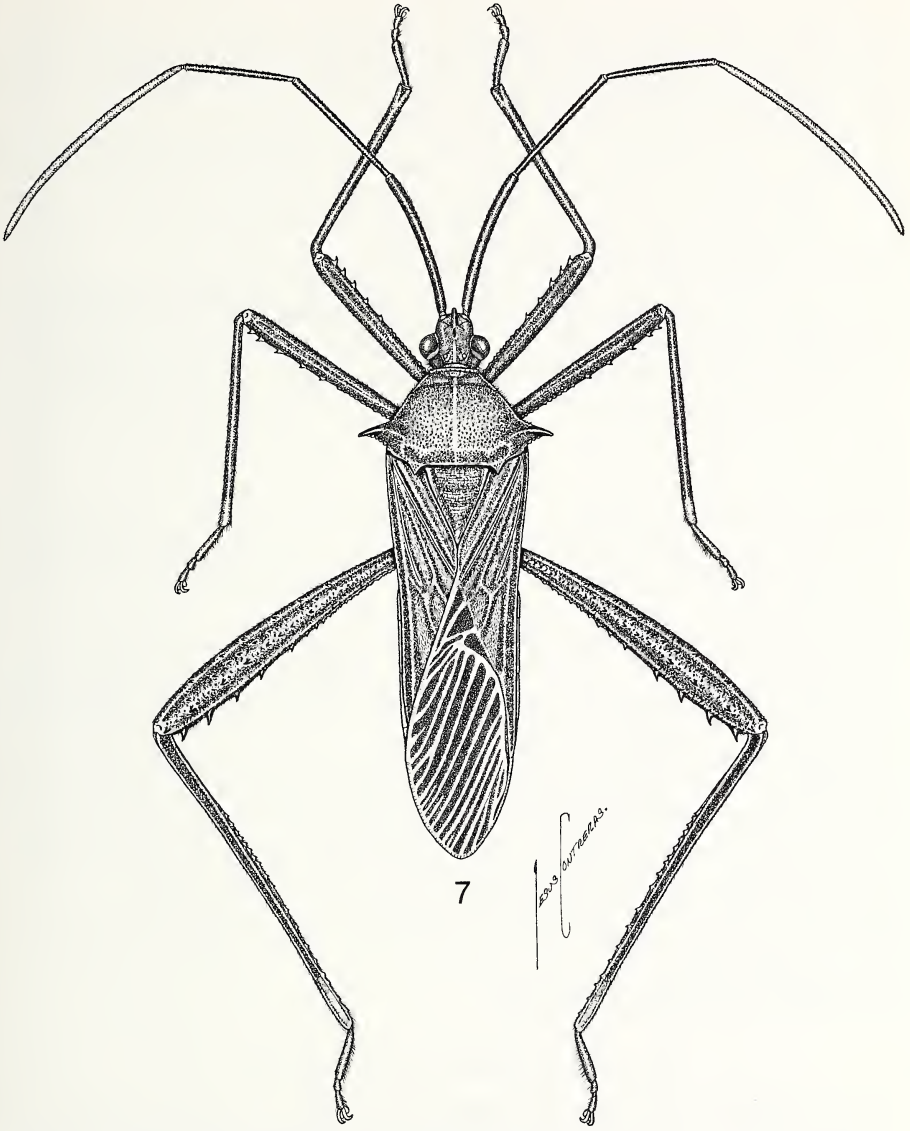


Fig. 7. Dorsal view of *Cleotopetalops polhemi* new species.

sopleura and thoracic metapleura bright chestnut orange red; metasternum dull chestnut orange; fore and middle leg pale chestnut orange with basal joint of femora, apical joint of tibiae and middle and apical segments of tarsi yellow; hind femur bright reddish brown with basal joint bright orange; hind tibia pale chestnut orange with apical third pale yellow; hind tarsus with basal segment yellow and middle and hind segment pale chestnut orange; abdominal sterna and genital capsule black; rim

of abdominal spiracle black, and adjacent area dirty yellow; pleural margin scattered with irregular dirty yellow marks. *Structure*. Triangular process of pronotum conspicuously produced. *Genital capsule*. Posteroventral edge with lateral angles straight, with deep "V" concavity (Fig. 5).

*Measurements*. Length head: 1.87; width across eyes: 2.12; interocular space: 0.80; interocellar space: 0.40; length of antennal segments: I, 4.95; II, 4.40; III, 3.55; IV, 8.40; length of rostral segments: I, 1.22; II, 1.25; III, 1.30; IV, 1.27. Pronotum length: 3.55; width across frontal angles: 1.75; width across humeral angles: 6.05. Scutellar length: 2.25; width: 1.90. Total body length: 17.48.

*Female*. Similar to male. Head ventrally black with buccula and rostral segments I to IV (apex of IV black) bright chestnut orange; connexival segments VIII and IX, dorsal abdominal segments VIII and IX, and genital plates black to dark reddish brown; abdominal sterna black with pleural margins III to VI and anterior half of VII, two broad longitudinal stripes running lateral to midline on sterna IV and V, middle third of sternite III, and the area adjacent to each abdominal spiracle dirty yellow.

*Measurements*. Length head: 1.75; width across eyes: 2.10; interocular space: 0.85; interocellar space: 0.42; length of antennal segments: I, 4.10; II, 3.75; III, 3.25; IV, 8.25; length of rostral segments: I, 1.67; II, 1.32; III, 1.12; IV, 1.15. Pronotum length: 3.30; width across frontal angles: 1.90; width across humeral angles: 5.85. Scutellar length: 1.90; width: 1.72. Total body length: 16.20.

**Types**. Holotype, ♂, PERU, **Madre de Dios**, Rio Tambopata, Res. 30 air km SW Pto. Maldonado, 290 m, 6-10.xi.1979, J. B. Heppner, subtropical moist forest (USNM). Paratypes: PERU: 1 ♂, same data as holotype (USNM); 1 ♀, Saposá, 320 m, 1-6.ix.1948, C. Bolívar (UNAM).

**Discussion**. *Cleotopetalops polhemi*, new species, like *C. cyanocephalus* has the corium black without a yellow longitudinal stripe, and the triangular process of pronotum well developed. Is recognized by the shape of the posteroventral edge of the male genital capsule (Figs. 5-6) and by having the pronotal disc entirely black, and not almost dirty chestnut orange characteristic of *C. cyanocephalus*.

**Etymology**. This new species is named in honor of a long time friend, John T. Polhemus, in recognition of his many contributions to the systematics of the aquatic and semiaquatic bugs.

**Distribution**. Known only from Peru.

KEY TO THE SPECIES OF *CLEOTOPETALOPS*

1. Corium black with broad longitudinal yellow stripe running through endocorium; triangular process of pronotum small; posteroventral edge of male genital capsule with small sized concavity (Fig. 4) . . . . . *C. bicolor*, new species
- Corium black without yellow longitudinal stripe; triangular process of pronotum well developed; posteroventral edge of male genital capsule with another condition (Figs. 5-6) . . . . . 2
2. Pronotal disc entirely black; posteroventral edge of male genital capsule with deep V-shaped concavity (Fig. 5) . . . . . *C. polhemi*, new species
- Pronotal disc dirty chestnut orange, with collar, calli, posterior margin and humeral angles black; posteroventral edge of male genital capsule with broad median plate slightly sinuate (Fig. 6) . . . . . *C. cyanocephalus*, new species



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